UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,082	01/08/2004	Holger Hoppe	543822003200	5415

25227 7590 07/25/2005

MORRISON & FOERSTER LLP
1650 TYSONS BOULEVARD
SUITE 300
MCLEAN, VA 22102

EXAMINER	
CHAN, EMILY Y	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/753,082	HOPPE, HOLGER	
	Examiner	Art Unit	
	Emily Y. Chan	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7-9 and 11-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7-9 and 11-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/30/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Shigeru Japan Patent Publication No. 09-007661.

With respect to claim 1, Shigeru ('661) discloses connection pin of IC socket (1) or a test socket (see Figs 1 and 5-6) as claimed, comprising :

at least one connection pin (2), the connection pin being configured to be introduced into a corresponding recess (12) of a contact device (connector 4) of a device (printed –circuit board 5) to which the socket device (1) is to be connected;

wherein at least one section of the connection pin (2) is made of a resilient material (see OPERATION, lines 5-7 "the connection pin which has spring nature ") and comprises a curved shape (see EXAMPLE , paragraph (0014) " pin 2 ... was made crooked") such that a clamping connection is provided between the contact device (4) and the connection pin (2) when the at least one section of the connection pin is introduced into the recess (12) of the contact device (4) (see Fig. 1).

With respect to claim 2, Shigeru ('661) discloses the test socket device (1) is a semiconductor device (IC device 11) testing socket which is configured such that, for testing a semiconductor device (IC device 11).

With respect to claim 9, Shigeru ('661) disclose that the device (5) comprising the contact device (4) is a testing apparatus (see CONSTITUTION, "IC tester").

With respect to method claim 14, Shigeru ('661) discloses the steps of connecting a socket (1) to a testing system (5) and loading the socket device with a semiconductor device (IC device 11) to be tested (see paragraph 1 above),

Therefore, Shigeru ('661) anticipates the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru ('661) in view of Ptaff et al US Patent No. 6,124,720.

Shigeru ('661) does not disclose that the test socket device (1) is a burn-in socket and the resilient material of the connection pin (2) is a metal alloy comprising copper and/or beryllium.

Ptaff et al ('720) disclose a burn –in test sockets or adapter device for surface mount device packages (see Figs 1-4, 10) comprising at least one connection pin (11) configured to be connected to a corresponding contact device (contact pad 41) (see Fig. 3). Specifically, Ptaff et al ('720) disclose that their connection pin (11) is made of a flexible or resilient material such as gold-plated steel or alloys such as beryllium-copper alloy (see Col. 3, lines 16-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of Ptaff et al ('720) into Shigeru ('661) 's test socket device so that Shigeru ('661) 's socket can be used as a burn –in testing adapter because Ptaff et al ('720) disclose that their socket may be used for test and burn-in of extremely high frequency device without introducing signal distortion problem (see Col. 2, lines 27-30).

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru ('661) in view of Kallee Werner DE 19852942.

Shigeru ('661) does not disclose that the at least one section of the connection pin (2) has the shape of a wave attenuated in a direction leading away from the socket device (1) .

Kallee Werner ('942) discloses a contact element (see Figs. 2-3) or a connection pin having the shape of a wave attenuated in a direction leading away from a socket device (1) is introduced into a hole (10) of a contact device (11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of Kallee Werner ('942) into Shigeru ('661) 's test socket device so that Shigeru ('661)'s connection pin has the wave shape for the purpose of soldless or clamping connection as disclosed by Kallee Werner ('942).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru ('661) in view of Kurosu et al US Patent No. 6,262,584.

Shigeru ('661) does not disclose that his printed circuit board (5) is configured to be connected to a testing apparatus.

Kurosu et al ('584) disclose an IC device temperature control system (see Fig. 6) comprising a burn-in socket (4) and a printed circuit board (45). Specifically, Kurosu et al ('584) disclose that their printed circuit board (45) is configured to be connected to a testing apparatus (IC tester 44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of Kurosu et al ('584) into Shigeru ('661) 's test socket device so that Shigeru ('661)'s printed circuit board (5) is configured to be connected to a testing apparatus for the expected benefit of evaluating the performance of an IC device correctly as disclosed by Kurosu et al ('584) (see Col. 1, lines 8-9).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru ('661) in view of Kurosu et al US Patent No. 6,262,584.

With respect to claim 11, Shigeru ('661) discloses a connection pin of IC socket (1) or a system (see Figs 1 and 5-6) as claimed, comprising:

At least one socket (1) device adapted to carry a semiconductor device (IC device 11) to be tested and

At least one circuit board (5)

Wherein the socket device (1) comprises at least one connection pin (2) which is configured to be introduced into a corresponding recess (12) of a contact device (connector 4) for connection to the printed –circuit board (5) and at least one section of

the connection pin (2) is made of a resilient material (see OPERATION, lines 5-7 "the connection pin which has spring nature ") and comprises a curved shape (see EXAMPLE , paragraph (0014) " pin 2 ... was made crooked").

Shigeru ('661) does not disclose that his printed circuit board (5) is configured to be connected to a testing apparatus.

Kurosu et al ('584) disclose an IC device temperature control system (see Fig. 6) comprising a burn-in socket (4) and a printed circuit board (45). Specifically, Kurosu et al ('584) disclose that their printed circuit board (45) is configured to be connected to a testing apparatus (IC tester 44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of Kurosu et al ('584) into Shigeru ('661) 's test socket device so that Shigeru ('661)'s printed circuit board (5) is configured to be connected to a testing apparatus for the expected benefit of evaluating performance of an IC device correctly as disclosed by Kurosu et al ('584) (see Col. 1, lines 8-9).

6. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru ('661) in view Kurosu et al ('584) as applied to claim 11 above, and further in view of Isaac et al US Patent No. 5,742,170.

Shigeru ('661) in view Kurosu et al ('584) does not specify that that the connection between the connection pin (2) and the contact device (4) is performed without soldering and that the socket device comprise a plurality of connection pins connected with respectively corresponding contact devices.

Isaac et al ('170) disclose a semiconductor test socket and contact (see Figs 1-5) comprising a plurality of connection pin (44). Isaac et al ('170) exclusively teach that the connection between the connection pin (44) and respectively corresponding contact device (see Fig. 2) is performed without soldering (see ABSTRACT).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of Isaac et al ('170) into Shigeru ('661) in view Kurosu et al ('584)'s system for the purpose of providing a semiconductor device test socket which includes solderless multiple contact assembly for communication between a semiconductor device under test and a semiconductor device test circuit as disclosed by Isaac et al ('170) (see ABSTRACT).

Response to Arguments

Applicant's arguments with respect to claims 1-3,5,7-9,13 and 14 have been considered but are moot in view of the new ground(s) of rejection.

Response to Amendment

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y. Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC
7-19-05

VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
07/20/05